

Work Order ID 85142

85142

Page 1

June-04-12 1:27:01 PM

Item ID: D350-636-012

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube RH

Start Date: 04/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/04 Tooling:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								

100

0.00

100

DOCUMENT CONTROL

DC

0.00

Memo

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 006

DA
16
2-83
12/06/04
JB

[Signature] for MLJ 12-7-17

B85142R+1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Stop

NS2

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1

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Required Date: 18/06/2012 Req'd Qty: 1.00

1

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. ***SECOND SIDE***

8-Open up holes for Detail "K" to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail L to 0.500" (8 holes per side)

9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

10-Open up holes of Detail A to 0.297" (total of 2 holes per side)

BE 12/06/25

SAD 12-06-28

BE 12/06/25

SAD 12-06-28

B 12/06/28

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Required Date: 18/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run Start *NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140									
HandFinish	Memo	0.00							
Hand Finishing									
150	QC7-Inspect Chemical Conversion Coat	0.00							
150									
QC	Memo	0.00							
Quality Control									

BIRH *12/07/03*

1 *0 BE 12/07/06*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00

160

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R Sikaflex-291 batch: M121407
exp. date: 13-04-12

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R Aluminum Rod batch: M122130

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

SA 12-07-06

JBE 12/07/09

JBE 12/07/11

12/07/06

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QC:

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SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	dwg D2750								
	12-Deburr holes								
170	QC10- Inspect visual per QSI004- ground welds	0.00							
170									
QC	Memo	0.00							
Quality Control									
180	QC5- Inspect part completeness to step on W/O	0.00							
180									
QC	Memo	0.00							
Quality Control									

3 BE 12/07/11

8/26/11

8/26/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Pressure Wash per QSI005 4.3	0.00							
190									
HandFinish	Memo	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.								
200	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
200									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 7:15								
	OVEN TEMPERATURE: 320 °F								
	FINISH TIME: 7:45								
210	QC3- Inspert Part Finish	0.00							
210									
QC	Memo	0.00							
Quality Control	Inspect for foreign object per QSI 024								

1 7/6 12-7-17

IX 12/07/12

IRH d 12/10/12

W/O:		WORK ORDER CHANGES					
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Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept Reject Reject Insp.
Qty Qty Number Stamp

230

230

HandFinish

HandFinishing

0.00

Memo

0.00

Hand Finishing

1-Install inserts as per dwg D2750

2-Inspect for Foreign Objects

3-Spray inside of tube with "LPS-3"

batch: 010

4-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: AA121130

EXP DATE: 12/03

5-assemble o'ring to plug as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 1110342

6-Coat all exposed fasteners with "LPS Procyon"

batch: AA114596

1-RH - f M4/04/12

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Process Plan:

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Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

240

QC

Memo

0.00



12/14/16

Quality Control

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

L

12/07/17 JB

260

QC4- 100% Inspect kits for completeness

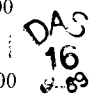
0.00

260

QC

Memo

0.00



12/14/16

Quality Control



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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	QC:	Date:	SPC (Y/N):	Date:	Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
270	Packaging								
Packaging	Memo	0.00							
Packaging	Package as per PPP D350-636-012								
280									
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

12/17/18

12/17/18

unc

12-07-18

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Page 1

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Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:102.09.25Rearranged procedure stepsKJ
 IPP Rev:J 06-03-29 As per Rev D EC
 IPP Rev:K 06-07-13 As per dsi9343 EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC
 IPP Rev:M 08-04-22 update steps 4,13 DD verified by:EC
 IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec IPP Rev:O
 10.06.22 revise seq110 DD verf:EC IPP Rev:P 10.10.01 as
 per IIN revH DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-3-BENT		Manufactured	No			110	Each	29.0000	1	1			

D2600-3-BENT

Extrusion Bent

**

BC 12/06/25

Location	Loc Qty	Loc Code
LG	29	
66875	7	
73253	1	
75021	1	
75022	1	
75023	1	
81330	4	
83305	1	
83442	13	

D2744

Manufactured No

110 Each

35.0000

1

1

D2744

Cap

**

BC 12/06/25

Location	Loc Qty	Loc Code
LG002	35	
62715	1	
78900	3	
83412	31	

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D2739

Manufactured No

160

Each

13.0000

1

1

D2739

350 I Beam

**

SAD 12-04-08

Location

Loc Qty

Loc Code

LG

13

72155

1

81508

1

83447

4

83448

5

83548

2

296.0000

8

8

D2743

Manufactured No

160

Each

D2743

Crossbolt Spacer

**

BE 12/07/09

Location

Loc Qty

Loc Code

LG

222

81965

55

83262

167

LG001

74

67766

4

68251

3

73403

64

74445

1

79517

2

46.0000

4

4

D3490-3

Manufactured No

160

Each

D3490-3

Cross Bolt Spacer

**

BE 12/07/09

Location

Loc Qty

Loc Code

LG001

46

83313

46

4

June-04-12 1:27:06 PM

Shop Packet Print

Page 2

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Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3490-1

Manufactured No

160

Each

45.0000

4

4

D3490-1

Cross Bolt Spacer

**

B85479 8/22/07/09
4/11

Location

Loc Qty

Loc Code

LG

2

81976

2

LG001

43

62450

2

74875

4

77042

3

83269

34

D3631-1

Manufactured No

230

Each

347.0000

8

8

D3631-1

Washer

**

11 11/07/12

Location

Loc Qty

Loc Code

FG

332

81874

2

83588

330

ST072

15

68062

2

75548

13

D3791-1

Manufactured No

230

Each

17.0000

1

1

D3791-1

Wearplate

**

11 12/02/12

Location

Loc Qty

Loc Code

FP002

17

62239

2

83392

15

X1

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D350-636-012

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Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3793-3

Manufactured No

230

Each

28.0000

1

1

D3793-3

Wearshoe

**

HL 12/07/12

Location

Loc Qty

Loc Code

FP001

28

83394

16

83901

12

XL

MS21043-6

Purchased No

230

Each

618.0000

4

4

MS21043-6

NUT

**

HL 11/07/12

Location

Loc Qty

Loc Code

FG

20

103693

20

ST301

598

117887

2

118384

96

120308

500

XL

D3794-1

Manufactured No

230

Each

26.0000

1

1

D3794-1

Gasket

**

HL 12/07/12

Location

Loc Qty

Loc Code

FP

6

82167

6

FP002

20

83395

20

XL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 5

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

188.0000

8

8

NAS1611-010

O-RING

**

HL 12/07/12

Location

Loc Qty

Loc Code

FP001

188

1122151

x8

110915

14

117460

8

118077

1

118612

3

119438

47

121259

2

121415

4

121584

59

121723

50

D2741

Manufactured

No

250

Each

20.0000

1

1

D2741

Blade, 350 Skidtube

**

83135 JB 12/07/17

Location

Loc Qty

Loc Code

ST

-10

ST466

30

71856

1

79516

19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 6

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

146.0000

4

4

***NAS1515H3I ***

WASHER

**

HL 12/07/12

Location

Loc Qty

Loc Code

FG

40

102472

40

ST277

106

118686

3

119438

1

120360

11

121243

2

121556

89

yd

NAS1611-013

Purchased

No

230

Each

361.0000

8

8

NAS1611-013

O-RING

**

HL 12/07/12

Location

Loc Qty

Loc Code

FP001

361

116582

5

117291

2

117887

53

119623

36

121584

15

121825

200

121826

50

xe

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 7

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

451.0000

4

4

AN3C6A

BOLT

**

yl 12/07/12

Location

Loc Qty

Loc Code

FP001

1

111982

1

ST351

450

111982

2

116419

23

116549

2

116704

12

117619

10

117688

1

117872

5

118422

13

119449

21

120423

3

120693

158

121682

200

✓

NAS1149C0832R

Purchased

No

230

Each

257.0000

1

1

NAS1149C0832R

WASHER

**

yl 12/07/12

Location

Loc Qty

Loc Code

ST297

257

114915

257

✓

D3536-25

Manufactured

No

230

Each

28.0000

1

1

D3536-25

Gasket

**

yl 12/07/12

Location

Loc Qty

Loc Code

FP

28

83391

12

83900

16

✓

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Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 8

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3794-3

Manufactured No

230

Each

23.0000

1

1

D3794-3

Gasket

**

yl 12/07/12

Location

Loc Qty

Loc Code

FP

21

83396

21

FP002

2

74530

2

AN3C5A

Purchased

No

230

Each

1,302.000

34

34

AN3C5A

Bolt

**

yl 12/07/12

Location

Loc Qty

Loc Code

FP001

7

115835

7

ST350

1295

116419

28

117343

13

117764

7

117872

2

119749

23

120423

28

121068

12

121255

500

121444

182

121708

500

x34

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 9

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

230

Each

83.0000

3

3

D3537-1

Wearpad

**

JK 11/07/12

Location

Loc Qty

Loc Code

FG

10

B 83256

x2

79833

10

FP002

73

B 85457

x1

69817

5

81360

14

81362

19

83254

1

83255

3

84091

31

D3535-25

Manufactured No

230

Each

34.0000

1

1

D3535-25

Wearshoe

**

JK 12/07/12

Location

Loc Qty

Loc Code

FP001

34

62233

1

81357

1

82156

2

83387

17

83899

13

D3492-3

Manufactured No

230

Each

167.0000

8

8

D3492-3

Plug

**

JK 11/07/12

Location

Loc Qty

Loc Code

FP-A

167

81967

5

83099

40

83529

122

x2

June-04-12 1:27:06 PM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 10

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

AN960C10L

NAS1149C0332

Purchased

No

230

Each

0.0000

38

38

*AN960C10L *W

washer

D3488-042

Manufactured

No

230

Each

9.0000

1

1

D3488-042

Blade Fitting Assembly, RH

**

**

11122063

(x38) M 11/07/12

M 11/07/12

Location

Loc Qty

Loc Code

FP002

9

B83411

x1

62003

1

77015

1

82258

7

ALS4-1032-225

Purchased

No

230

Each

781.0000

38

38

AI S4-1032-225

Insert

**

M 11/07/12

Location

Loc Qty

Loc Code

ST281

758

108696

146

110768

62

118386

55

118966

68

121269

427

11122290

x38

ST282

23

120410

10

120451

13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 11

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3492-1

Manufactured No

230

Each

257.0000

8

8

D3492-1

Plug

**

HL

12/07/12

Location

Loc Qty

Loc Code

FP002

242

69531

8

74444

2

76235

4

83259

228

FP-A

15

83098

15

X 8

D3793-1

Manufactured No

230

Each

28.0000

1

1

D3793-1

Wearshoe

**

HL

12/07/12

Location

Loc Qty

Loc Code

FP001

28

82171

2

83393

13

83903

13

✓ 1

AN8C35A

Purchased No

230

Each

68.0000

1

1

AN8C35A

BOLT

**

HL

12/07/12

Location

Loc Qty

Loc Code

FP002

67

115960

1

118286

16

121275

50

ST346

1

114442

0

115188

0

115960

1

✓ 1

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Shop Packet Print

Page 11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 12

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

230

Each

81.0000

1

MS21083C8

NUT

**

11/07/12

Location

Loc Qty

Loc Code

304

75

121185

29

121349

46

FP002

1

115884

1

ST303

4

115884

0

118077

1

119309

2

119638

1

ST304

1

121524

1

D2745

Manufactured

No

230

Each

122.0000

8

8

D2745

Bushing

**

11/07/12

Location

Loc Qty

Loc Code

FP

6

79518

6

FP001

116

69529

1

76142

1

83260

114

B81964?

B85416

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 13

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

86.0000

4

4

AN6C44A

BOLT

**

11/07/12

Location

Loc Qty

Loc Code

FG

2

103964

2

ST343

84

121013

11

121167

13

121440

50

121689

10

✓✓

D3532-1

Manufactured

No

250

Each

7.0000

2

2

D3532-1

Spacer

**

83319 JB 12/07/17

Location

Loc Qty

Loc Code

ST053

7

82041

7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 14

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

250

Each

81.0000

2

2

✓

**

JB

[Signature]

8 *MS21083C8*

NUT

Location

Loc Qty

Loc Code

304

75

121185

29

121349

46

121349

FP002

1

115884

1

ST303

4

115884

0

118077

1

119309

2

119638

1

ST304

1

121524

1

NAS1149D0863J

Purchased

No

250

Each

251.0000

2

2

✓

**

JB

12/07/17

[Signature]

5 *NAS1149D0863.J*

WASHER

Location

Loc Qty

Loc Code

ST298

251

118078

34

119307

17

120308

100

121556

100

120308

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 15

Work Order ID: 85142

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

85142

D350-636-012

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250

Each

127.0000

2

2

**

D3493-1

Washer

Location

Loc Qty

Loc Code

ST050

127

77573

1

82023

26

83097

100

83097

Purchased

No

250

Each

57.0000

2

2

**

AN8C21A

AN8C21A

BOLT

Location

Loc Qty

Loc Code

ST343

57

118758

3

121167

4

121275

50

121275

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1			D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 85142 MCT
12/06/04

RELEASED
6-27-10

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL.) WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	RD	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RD		
CHECKED	LD	DRAWING NO.	REV. F
MFG. APPR.	LD	D2750	SHEET 1 OF 11
APPROVED	AM	TITLE	SCALE
DE APPR.	AM	350 SKIDTUBE ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

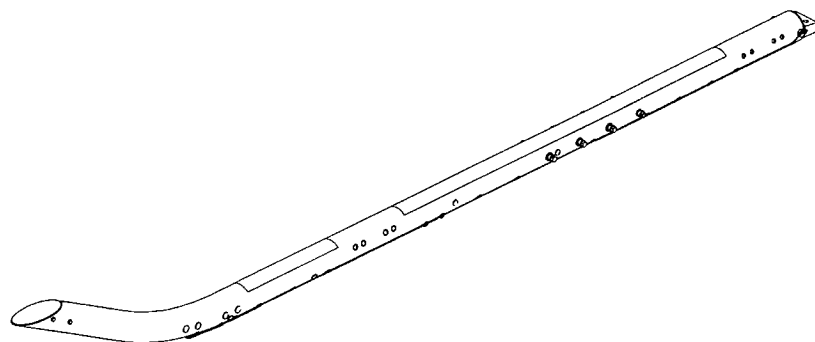
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

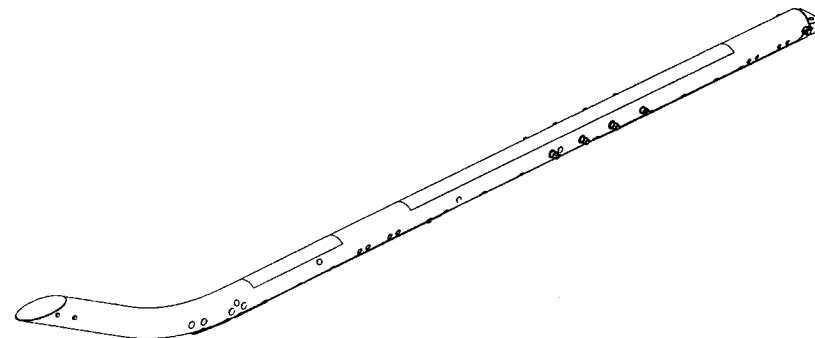
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

05142



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

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08.07.16

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MFG. APPR.	ME	D2750	SHEET 2 OF 11
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DE APPR.	ME	350 SKIDTUBE ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

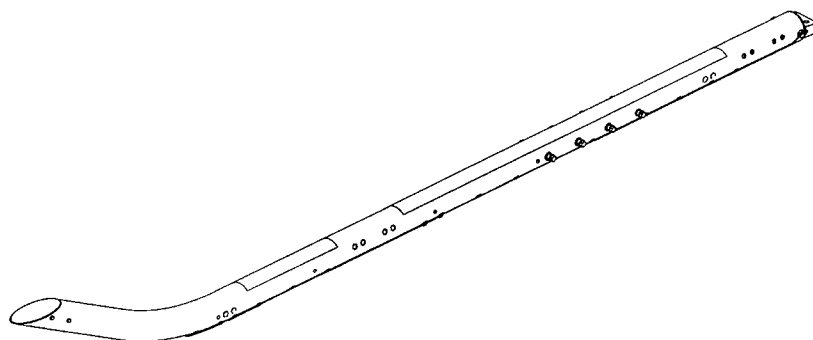
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

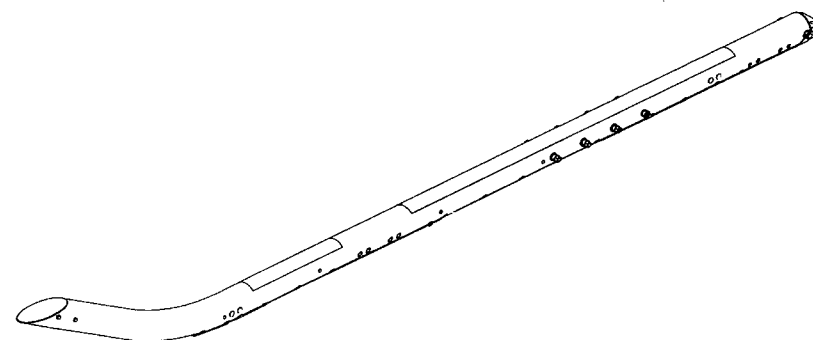
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

25142



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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68-09-22/17

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MFG. APPR.	170	D2750	SHEET 3 OF 11
APPROVED	170	TITLE	SCALE
DE APPR.	170	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

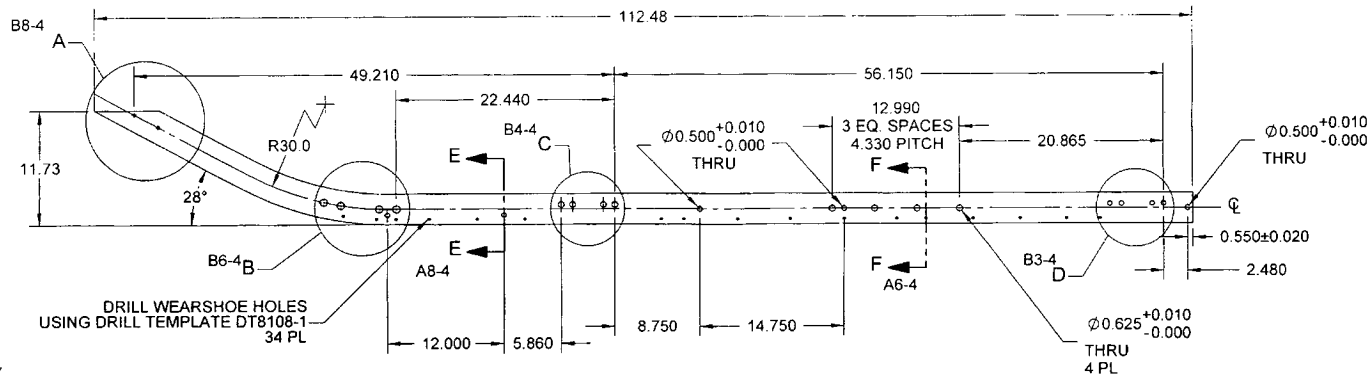
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

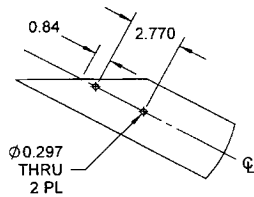
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

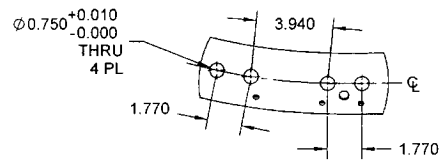
NOTE: Date & initial all entries



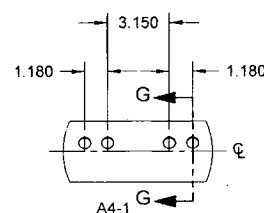
D2750-1 LH SKIDTUBE



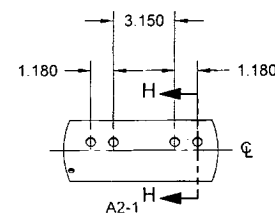
DETAIL A
SCALE 2X



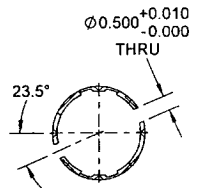
DETAIL B
SCALE 2X



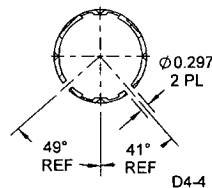
DETAIL C
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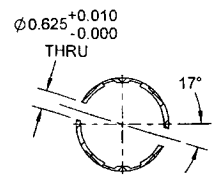
DETAIL D
SCALE 2X



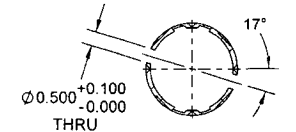
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

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85142

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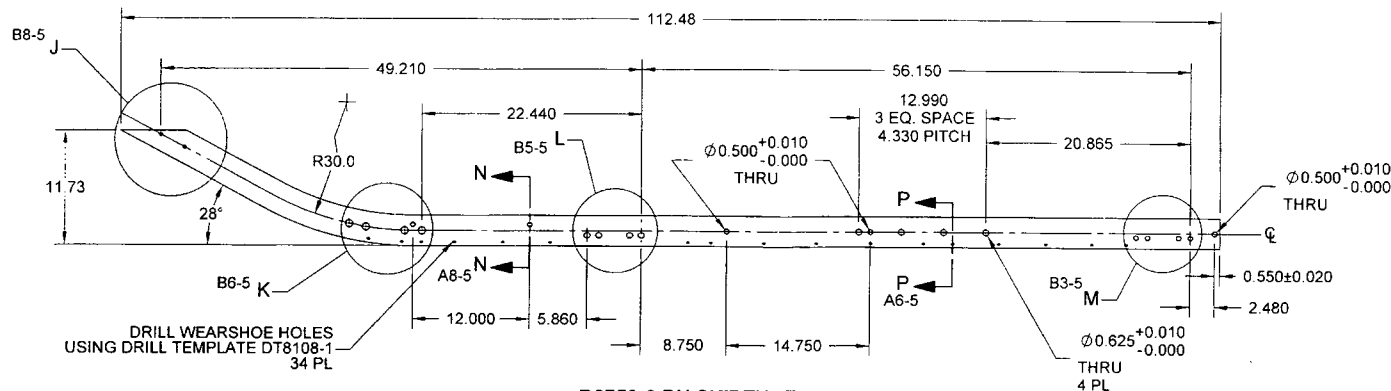
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

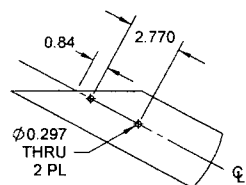
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

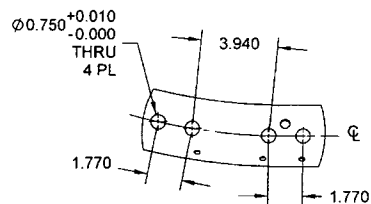
85142



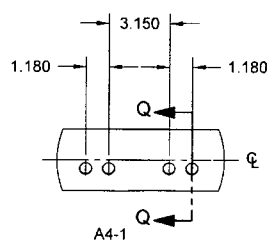
D2750-2 RH SKIDTUBE



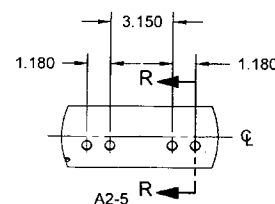
DETAIL J
SCALE 2X



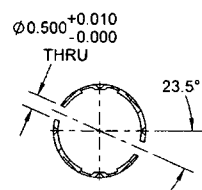
DETAIL K
SCALE 2X



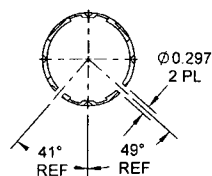
DETAIL L
SCALE 2X



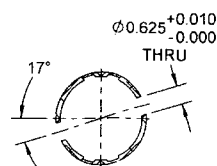
DETAIL M
SCALE 2X



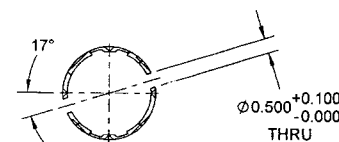
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

DESIGN	PE	DART AEROSPACE USA, INC.	
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APPROVED	PE	TITLE	SCALE
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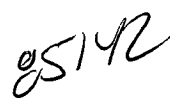
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



0.84

2.770




$\phi 0.297$
THRU
2 PL

Q

Figure 1 is a schematic diagram of the geometry of the test specimen. It shows a circular cross-section of a ring with a diameter of 0.297 inches. The ring is composed of two plates (2 PL). The geometry is defined by two reference angles: 49 degrees and 41 degrees, both labeled 'REF'.

SECTION X-X
SCALE 3X, 4 PL

RELEASED
08-09-22 JHP

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MFG. APPR.		D2750	SHEET 6 OF 11
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

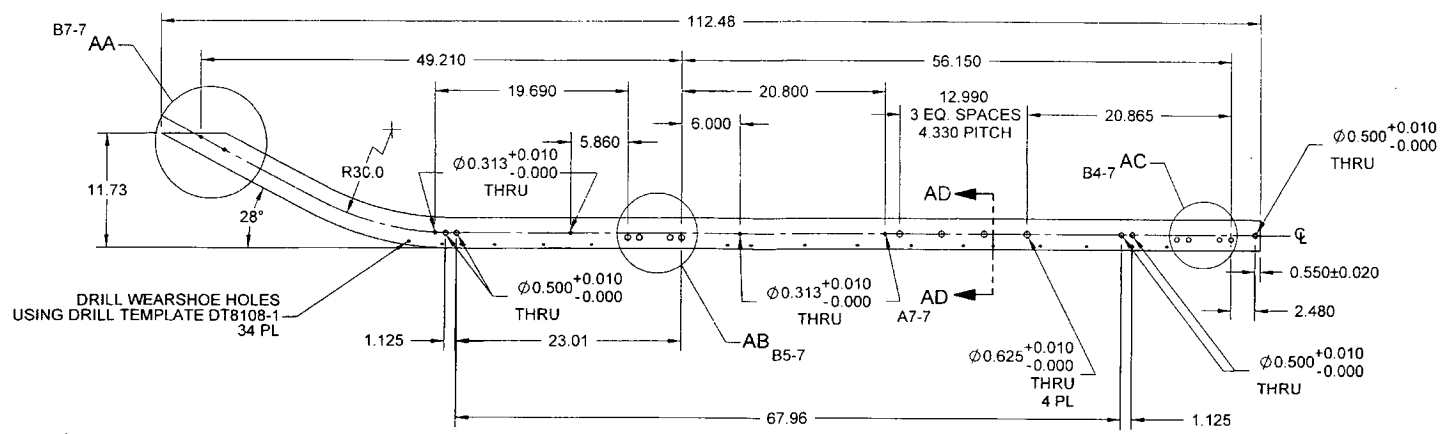
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

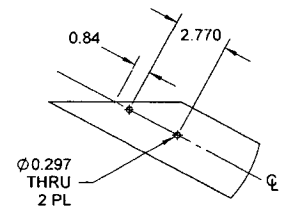
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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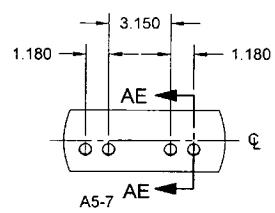
25742



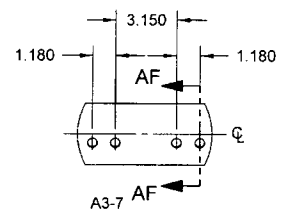
D2750-4 RH SKIDTUBE



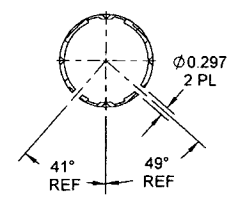
DETAIL AA
D7-7
SCALE 2X



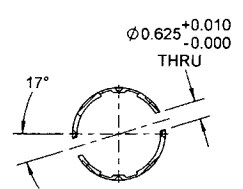
DETAIL AB
C4-7
SCALE 2X



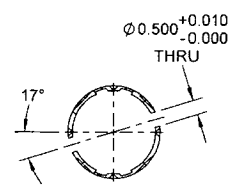
DETAIL AC
D3-7
SCALE 2X



SECTION AD-AD
D3-7
SCALE 3X, 17 PL



SECTION AE-AE
B6-7
SCALE 3X, 4 PL



SECTION AF-AF
B4-7
SCALE 3X, 4 PL

RELEASED
08-09-2016

DESIGN	REV	DART AEROSPACE USA, INC.	
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CHECKED	REV	DRAWING NO. D2750	REV. F
MFG. APPR.	REV	TITLE	SHEET 7 OF 11
APPROVED	REV	350 SKIDTUBE ASSEMBLY	
DE APPR.	REV	SCALE	
DATE	08.07.16	NTS	

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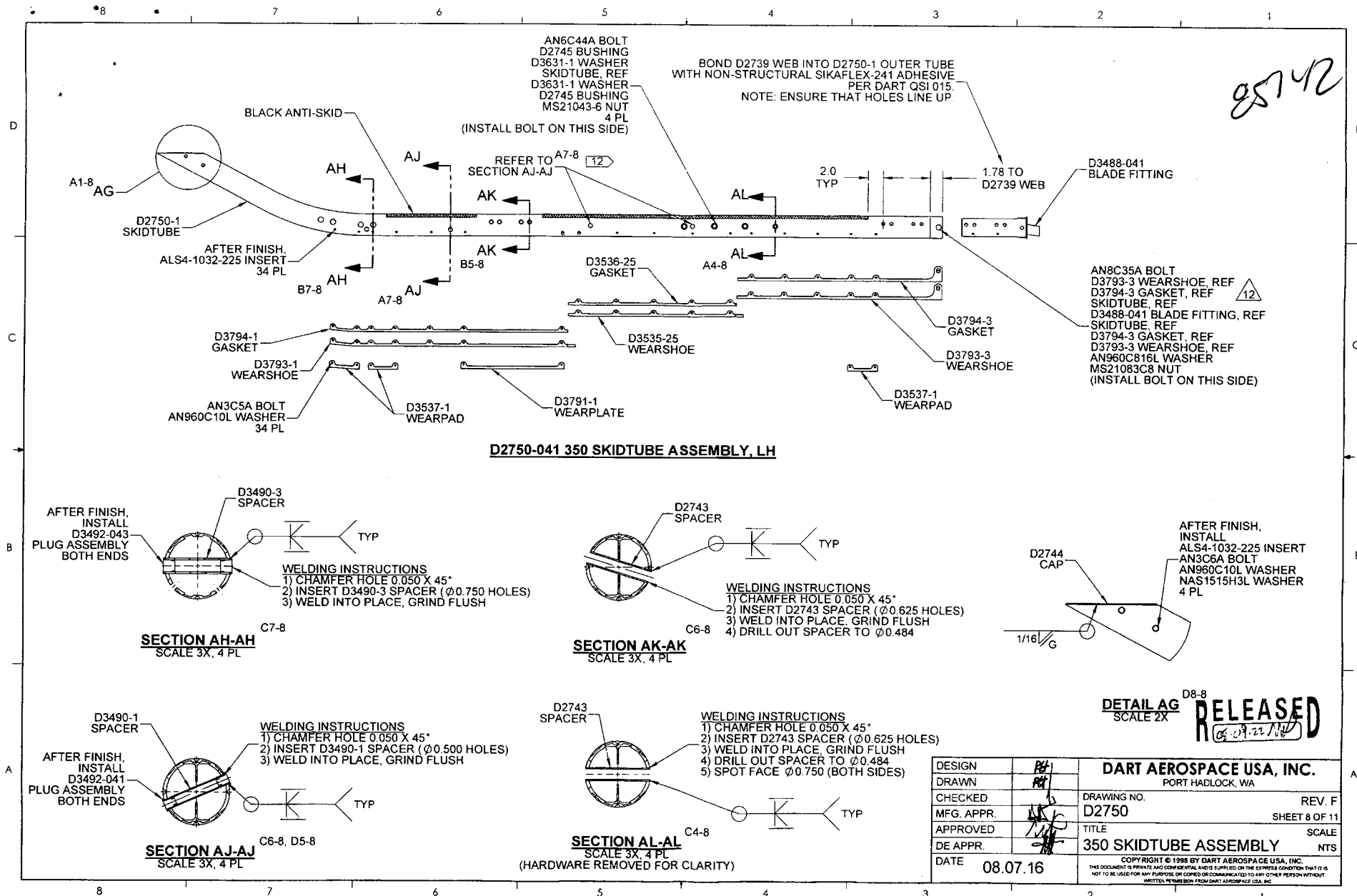
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

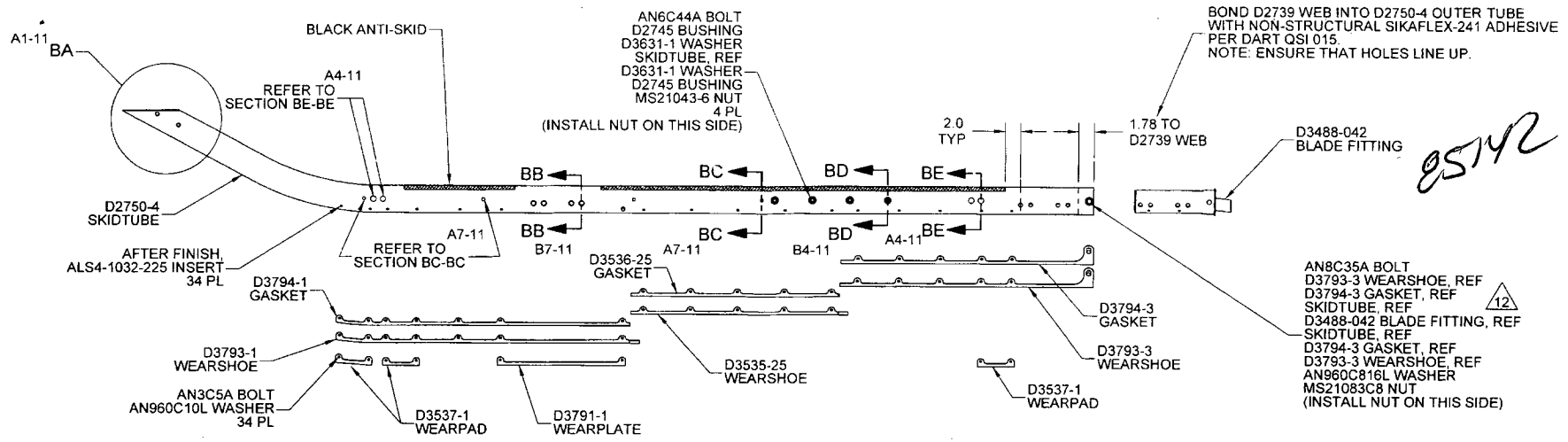
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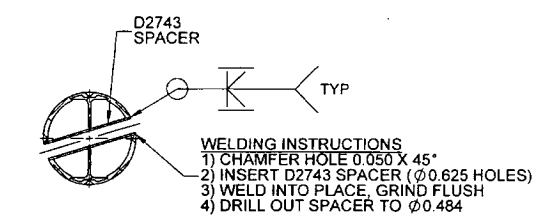
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

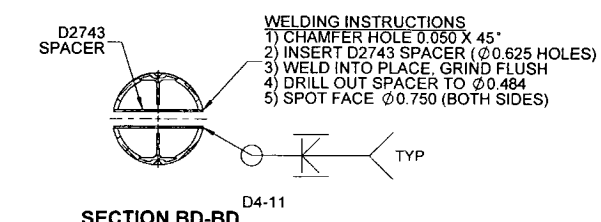
NOTE: Date & initial all entries



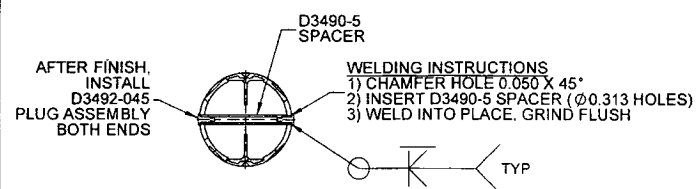
D2750-044 350 SKIDTUBE ASSEMBLY, RH



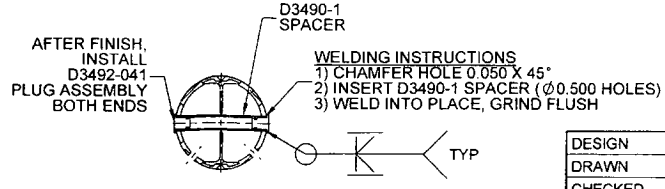
SECTION BB-BB
SCALE 3X, 4 PL



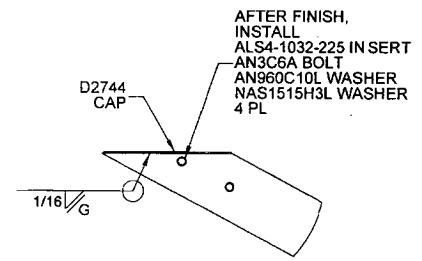
SECTION BD-BD
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION BC-BC
SCALE 3X, 4 PL



SECTION BE-BE
SCALE 3X, 4 PL



DETAIL BA
SCALE 2X

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 294

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 83800
Part number: A350-636-012
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier David Arval Date of Test Coupon 12.05.09

Welder Barday Elliott Date of Test Coupon 12.05.09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld